

IN THE CLAIMS

Please amend claim 4 as follows below.

Please add new dependent claims 35-40 as follows below.

The following listing of claims replaces prior versions, and listings, of claims in the application:

MARKED UP LISTING OF CLAIMS

- 1 1. (Original) A fiber optic module comprising:
2 a pull-lever actuator to disengage and withdraw the
3 fiber optic module from a cage assembly; and
4 one or more electro-optic transducers to convert
5 optical signals into electrical signals or electrical
6 signals into optical signals.
- 1 2. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator is activated to disengage and
3 withdraw the fiber optic module by a single downward pull
4 action.
- 1 3. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator to lever a release latch and
3 pull out on the fiber optic module.
- 1 4. (Currently Amended) The fiber optic module of claim 3
2 further comprising:
3 a catch to engage the release latch of [[a]] the cage

4 assembly to retain the fiber optic module therein.

1 5. (Original) The fiber optic module of claim 1 further
2 comprising:

3 one or more electrical contacts to couple to one or
4 more electrical contacts of a host printed circuit board.

1 6. (Original) The fiber optic module of claim 1 further
2 comprising:

3 an edge connection of a printed circuit board with one
4 or more electrical contacts to couple to an edge connector
5 of a host printed circuit board.

1 7. (Original) The fiber optic module of claim 1 wherein,
2 the fiber optic module is an SFP fiber optic module
3 and the cage assembly is an SFP cage assembly.

1 8. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator includes an EMI shield to
3 contain EMI emissions.

1 9. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator includes
3 a lever arm to lever between the fiber optic
4 module and the cage assembly to release a hook of the fiber
5 optic module from a latch of the cage assembly.

1 10. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator includes

3 a pull grip,
4 a lever arm coupled to the pull grip,
5 an EMI shield coupled to the lever arm, and
6 grounding tabs coupled to the EMI shield.

1 11. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator includes
3 a pull grip having dimples to prevent slippage of
4 a user's grip on the pull-lever actuator.

1 12. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator includes
3 a pull ring to allow a user's finger to pull down
4 and out on the pull-lever actuator.

1 13. (Original) The fiber optic module of claim 1 wherein,
2 the pull-lever actuator is formed of a conductive
3 material.

1 14. (Original) The fiber optic module of claim 13 wherein,
2 the pull-lever actuator is formed of metal.

1 15. (Original) A pull-lever actuator for fiber optic
2 modules having one or more electro-optic transducers, the pull-
3 lever actuator comprising:
4 a pull grip to allow a user to grip a first end of the
5 pull-lever actuator;
6 a lever arm coupled to the pull grip, the lever arm to
7 lever between the fiber optic module and a cage assembly to

8 release a hook of the fiber optic module from a latch of
9 the cage assembly;

10 an EMI shield coupled to the lever arm at a second end
11 of the pull-lever actuator, the EMI shield to contain EMI
12 emissions; and

13 grounding tabs coupled to the EMI shield, the
14 grounding tabs to provide a grounding link between the
15 EMI shield and the cage assembly.

1 16. (Original) The pull-lever actuator of claim 15 wherein,
2 the pull-lever actuator is activated to disengage and
3 withdraw the fiber optic module from the cage assembly by a
4 single downward pull action.

1 17. (Original) The pull-lever actuator of claim 15 wherein,
2 the pull grip has dimples.

1 18. (Original) The pull-lever actuator of claim 15 wherein,
2 the pull-lever actuator is formed of metal.

1 19. (Original) The pull-lever actuator of claim 15 wherein,
2 the fiber optic module is an SFP fiber optic module
3 and the cage assembly is an SFP cage assembly.

1 20. (Original) A fiber optic module comprising:
2 means for converting between optical signals and
3 electrical signals; and
4 means for disengaging and withdrawing the fiber optic
5 module from a cage assembly using a downward pull.

1 21. (Original) The fiber optic module of claim 20 further
2 comprising;
3 means for shielding electromagnetic radiation.

1 22. (Original) The fiber optic module of claim 20 further
2 comprising;
3 means for grounding the means for shielding
4 electromagnetic radiation.

1 23. (Original) A method to withdraw a fiber optic module
2 from a cage, the method comprising:
3 providing a pull-lever actuator for the fiber optic
4 module;
5 pushing down on an end of the pull-lever actuator to
6 lever a latch and release a catch; and
7 pulling out on the end of the pull-lever actuator to
8 withdraw the fiber optic module from the cage.

1 24. (Original) The method of claim 23 wherein,
2 the fiber optic module includes a hook to engage the
3 catch of the latch of the cage when inserted therein and
4 the pushing down of the end of the pull-lever actuator
5 levers the latch so the catch is disengaged from the hook.

1 25. (Original) The method of claim 23 wherein,
2 the pushing down and pulling out on the end of the
3 pull-lever actuator is by one motion.

1 26. (Original) A method to withdraw a fiber optic module
2 from a cage, the method comprising:
3 providing a lever actuator and a pull actuator for the
4 fiber optic module;
5 pushing down on an end of the lever actuator to lever
6 a latch and release a catch; and
7 pulling out on an end of the pull actuator to withdraw
8 the fiber optic module from the cage.

1 27. (Original) The method of claim 26 wherein,
2 the fiber optic module includes a hook to engage the
3 catch of the latch of the cage when inserted therein and
4 the pushing down of the end of the lever actuator
5 levers the latch so the catch is disengaged from the hook.

1 28. (Original) The method of claim 26 wherein,
2 the pulling out on the end of the pull actuator
3 withdraws the fiber optic module.

1 29. (Original) A fiber optic module comprising:
2 a lever actuator to disengage the fiber optic module
3 from a cage assembly;
4 a pull actuator to withdraw the fiber optic module
5 from the cage assembly; and
6 one or more electro-optic transducers to convert
7 between optical signals and electrical signals.

1 30. (Original) The fiber optic module of claim 29 wherein,

2 the lever actuator to lever a latch of a cage and to
3 release a catch of the fiber optic module.

1 31. (Original) The fiber optic module of claim 30 wherein,
2 the catch to engage the latch of the cage to retain
3 the fiber optic module therein.

1 32. (Original) The fiber optic module of claim 29 further
2 comprising:
3 an edge connection of a printed circuit board with one
4 or more electrical contacts to couple to an edge connector
5 of a host printed circuit board.

1 33. (Original) The fiber optic module of claim 29 wherein,
2 the fiber optic module is an SFP fiber optic module
3 which can be inserted and withdrawn from an SFP cage.

1 34. (Original) The fiber optic module of claim 29 wherein,
2 the pull actuator for a user to pull out on the fiber
3 optic module and to withdraw it from a cage.

1 35. (New) The fiber optic module of claim 1 further
2 comprising:
3 a printed circuit board, the one or more electro-optic
4 transducers coupled to the printed circuit board; and
5 a housing over the printed circuit board and the one
6 or more electro-optic transducers.

1 36. (New) The fiber optic module of claim 1, wherein

2 the one or more electro-optic transducers includes a
3 first electro-optic transducer and a second electro-optic
4 transducer,

5 the first electro-optic transducer to convert optical
6 signals into electrical signals, and

7 the second electro-optic transducer to convert
8 electrical signals into optical signals.

1 37. (New) The fiber optic module of claim 20 further
2 comprising:

3 a printed circuit board, the means for converting
4 coupled to the printed circuit board; and

5 a housing over the printed circuit board and the means
6 for converting.

1 38. (New) The fiber optic module of claim 20, wherein
2 the means for converting includes

3 a first means to convert optical signals into
4 electrical signals; and

5 a second means to convert electrical signals into
6 optical signals.

1 39. (New) The fiber optic module of claim 29 further
2 comprising:

3 a printed circuit board, the one or more electro-optic
4 transducers coupled to the printed circuit board; and

5 a housing over the printed circuit board and the one
6 or more electro-optic transducers.

1 40. (New) The fiber optic module of claim 29, wherein
2 the one or more electro-optic transducers includes a
3 first electro-optic transducer and a second electro-optic
4 transducer,
5 the first electro-optic transducer to convert optical
6 signals into electrical signals, and
7 the second electro-optic transducer to convert
8 electrical signals into optical signals.

REMARKS

This Amendment is in response to the Office Action mailed on 09/12/2003. In the Office Action, claims 1-6, 9, 11, 20, 23-32, and 34 were rejected under 35 U.S.C. § 102(b), and claims 7-8, 10, 13-19, 21-22, and 33 were rejected under 35 U.S.C. § 103(a). Reconsideration in light of the amendments and remarks made herein is respectfully requested.

In this response, Applicant has amended claim 4 and added new claims 35-40 by this response. Accordingly, claims 1-40 are now pending. Of the pending claims, claims 1, 15, 20, 23, 26 and 29 are independent claims.

Applicant believes that no new matter has been added by this response.

I) Applicant's Interview Summary

A brief telephonic interview was held January 8, 2004 between Examiner Jean F. Duverne and Applicant's Attorney, William E. Alford, regarding the above referenced patent application and the Office Action mailed on 09/12/2003. Dependent claims 2-5 were discussed because there appeared to be no claim rejection of these claims in the office action even though the Office Action Summary indicated they were rejected.

Examiner Duverne explained that there was a typographical error in the office action in that the comma between the 1 and 6 should be treated as a dashed line so that claims 1-6, including dependent claims 2-5, stand rejected under 35 USC 102(b) as being anticipated by U.S. Pat. No. 4,432,604 issued to Richard E. Schwab ("Schwab"). Examiner Duverne further explained that the limitations of dependent claims 2-5 are alleged to be part

of the latching feature of Schwab explained in the Office Action.

No claim amendment was discussed and thus no agreement need be reached with respect to any claim amendments. No exhibit was shown nor was any demonstration conducted.

II) Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1-6, 9, 11, 20, 23-32, and 34 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,432,604 issued to Schwab ("Schwab"). Applicant respectfully traverses this rejection.

"To anticipate a claim, the reference must teach every element of the claim. 'A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... 'The identical invention must be shown in as complete detail as is contained in the claim.' *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)." [MPEP § 2131, 8th Edition, Rev. 1, Feb. 2003, Pg. 2100-701].

Regarding independent apparatus claims 1, 20, and 29, the Office Action states that "Schwab's device discloses a fiber module (see figs. 1-6), comprising a pull lever actuator (18) with latching features to disengage and withdraw the fiber from a cage assembly when the connector housing with optical fibers are connected to the module (22, 28), an electro-optic transducer (see col. 2, lines 1-19) for converting optical signal into electrical signal, electrical contacts (36, 34) and

an edge connection to a circuit." [Office Action, page 2, lines 11-17] Applicant respectfully disagrees.

In Schwab's "FIGS. 4, 5 and 6, there are shown three views of the circuit package 10 with particular emphasis on the locking mechanism." [Schwab, Col. 3, lines 61-63]. Referring to Schwab's "FIGS. 4 and 5, there is shown lever 18 for releasing pawl 162 from detent 164, thereby permitting the circuit package 10 to be unplugged from a frame 166. [Schwab, Col. 3, lines 61-63]. Schwab's "pawl 162 engages detent 164, thereby securely fastening the circuit package in place in the frame 166 (shown partially)." [Schwab, Col. 4, lines 15-17]. Referring to Schwab's "FIG. 6, there is shown the rear view of the faceplate 16 and the locking mechanism with pawl 162." [Schwab, Col. 3, lines 66-67].

One dictionary definition for pawl is "A hinged or pivoted device adapted to fit into a notch or a ratchet wheel to impart forward motion or prevent backward motion." [See Webster's II New College Dictionary, Copyright 1995, attached hereto as Appendix 1].

Regarding independent claims 1 and 20, Applicant respectfully submits that Schwab's lever 18 and locking mechanism does not disclose Applicant's pull-lever actuator. [See Applicant's Figures 7A-7F illustrating views of an exemplary pull-lever actuator 700]. Applicant's pull-lever actuator functions "to disengage and withdraw the fiber optic module from a cage assembly" as recited in claim 1. [Claim 1, lines 2-3]. Applicant's pull-lever actuator functions as a "means for disengaging and withdrawing the fiber optic module from a cage assembly using a downward pull" as recited in claim 20. [Claim 20, lines 4-5].

Regarding independent claim 29, Applicant respectfully submits that Schwab's lever 18 and locking mechanism does not disclose Applicant's pull actuator. [See Applicant's Figures 13 and 14 illustrating views of an exemplary pull actuator 1304]. Applicant's pull actuator functions "to withdraw the fiber optic module from the cage assembly" as recited in independent claim 29. [Claim 29, lines 4-5]. Moreover, Applicant respectfully submits that Schwab's lever 18 does not disclose Applicant's lever actuator. [See Applicant's Figures 13 and 14 illustrating views of an exemplary lever actuator 1302 separate from the exemplary pull actuator 1304]. Applicant's lever actuator functions "to disengage the fiber optic module from a cage assembly" as recited in independent claim 29. [Claim 29, lines 2-3].

Regarding independent method claims 23 and 26, the Office Action states that "Schwab's device discloses the aforementioned limitations but fails to explicitly disclose the method to withdraw the optical fiber, which is an obvious variation because the limitation recited in the method claims are also recited in the apparatus claims." [Office Action, page 2, lines 18-21]. Applicant respectfully disagrees.

Regarding independent method claim 23, Applicant respectfully submits that Schwab's lever 18 and locking mechanism does not disclose Applicant's "providing a pull-lever actuator for the fiber optic module; pushing down on an end of the pull-lever actuator to lever a latch and release a catch; and pulling out on the end of the pull-lever actuator to withdraw the fiber optic module from the cage" as recited therein. [Claim 23, lines 3-7].

Regarding independent method claim 26, Applicant respectfully submits that Schwab's lever 18 and locking

mechanism does not disclose Applicant's "providing a lever actuator and a pull actuator for the fiber optic module; pushing down on an end of the lever actuator to lever a latch and release a catch; and pulling out on an end of the pull actuator to withdraw the fiber optic module from the cage" as recited therein. [Claim 26, lines 3-8].

For the foregoing reasons, Applicant respectfully submits that independent claims 1, 20, 23, 26, and 29 are not anticipated by Schwab.

Rejected claims 2-6, 9, and 11 depend directly or independent claim 1. Rejected claims 24-25 depend directly from independent claim 23. Rejected claims 27-28 depend directly from independent claim 26. Rejected claims 30-32 and 34 depend directly or indirectly from independent claim 29.

Applicant believes that independent claims 1, 20, 23, 26, and 29 have been placed in condition for allowance such that dependent claims depending respectively therefrom with further limitations are also in condition for allowance.

Applicant respectfully requests the withdrawal of the 35 USC 102(b) rejection of claims 1-6, 9, 11, 20, 23-32, and 34 over Schwab.

III) Claim Rejections Under 35 U.S.C. § 103(a)

Claims 13-14, 18, and 21-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Schwab. Applicant respectfully traverses this rejection.

"To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion of motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art, to modify the reference the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)" [MPEP § 2142; 8th Edition, Rev. 1, Feb. 2003, Pg. 2100-124].

The remarks with respect to independent claims 1 and 20 recited above are incorporated here by reference.

As discussed previously, Applicant respectfully submits that Schwab's lever 18 and locking mechanism does not disclose Applicant's pull-lever actuator recited in independent claims 1 and 20.

Rejected claims 13-14, and 18 depend directly or indirectly from independent claim 1. Rejected claims 21-22 depend directly from independent claim 20.

Applicant respectfully submits that independent claims 1 and 20 are in condition for allowance such that dependent claims depending respectively therefrom with further limitations are also in condition for allowance.

Thus, Applicant respectfully requests the withdrawal of the 35 USC 103(a) rejection of claims 13-14, 18, and 21-22 over Schwab.

Claims 8, 10, and 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Schwab in view of U.S. Patent

Publication US 2002/0167793A1 issued to Branch, et al. (Branch). Applicant respectfully traverses this rejection.

Applicant respectfully submits that Branch is not a valid prior art reference.

Branch was filed on May 10, 2001.

This U.S. non-provisional patent application claims the benefit of U.S. provisional patent application No. 60/265,182 entitled "QUICK RELEASE FIBER OPTIC MODULES", filed on January 29, 2001 by Ron Cheng Pang et al and U.S. Provisional Patent Application No. 60/265,374 entitled "QUICK RELEASE FIBER OPTIC MODULES", filed on January 30, 2001 by Ron Cheng Pang et al. The filing receipt of this non-provisional patent application indicates the priority claims.

Because Branch was filed on May 10, 2001 after the latest priority date of January 30, 2001 of the present application, Branch is not a valid prior art reference that can be used to reject the Applicant's claims.

Thus, Applicant respectfully submits that it is improper to combine Schwab and Branch together to reject Applicant's claims. Applicant respectfully requests the withdrawal of the 35 USC 103(a) rejection of claims 8, 10, and 15-17 over the combination of Schwab and Branch.

Claims 7, 19, and 33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Schwab in view of U.S. Patent 6,416,361 issued to Jeng-Yih Hwang (Hwang). Applicant respectfully traverses this rejection.

Applicant respectfully submits that Hwang is not a valid prior art reference.

Hwang was filed on November 16, 2001.

As discussed previously this U.S. non-provisional patent application claims the benefit of U.S. provisional patent application No. 60/265,182, filed on January 29, 2001 and U.S. Provisional Patent Application No. 60/265,374, filed on January 30, 2001. The filing receipt of this non-provisional patent application indicates the priority claims.

Because Hwang was filed on November 16, 2001 after the latest priority date of January 30, 2001 of the present application, Hwang is not a valid prior art reference that can be used to reject the Applicant's claims.

Thus, Applicant respectfully submits that it is improper to combine Schwab and Hwang together to reject Applicant's claims. Applicant respectfully requests the withdrawal of the 35 USC 103(a) rejection of claims 7, 19, and 33 over the combination of Schwab and Hwang.

IV) New Claims

Applicant has added new dependent claims 35-40.

New claims 35-36 depend directly from independent claim 1.

New claims 37-38 depend directly from independent claim 20.

New claims 39-40 depend directly from independent claim 29.

Applicant respectfully submits that independent claims 1, 20, and 29 have been placed in condition for allowance such that these new dependent claims 35-40 depending respectively therefrom with further limitations are also in condition for allowance.

V) Other Claim Amendments

Applicant has amended claim 4 by changing "a" to --the-- and added --assembly-- after "cage" to be consistent and indicate an earlier usage of the phrase "cage assembly" in the claims. This amendment to claim 4 is not for reasons related to patentability.

VI) Information Disclosure Statements

Prior to the mailing date of the Office Action on 09/12/2003, Applicant filed electronic information disclosure statements (EIDSs) on 09/20/2002 with 51 U.S. references, 09/20/2002 with 58 U.S. references, 09/23/2002 with 52 U.S. references, 09/24/2002 with 82 U.S. references, and 05/16/2003 with 20 U.S. references. These EIDSs may have not yet been considered by the Examiner.

The EIDS filed on 09/20/2002 with 51 U.S. references is attached hereto as Appendix 2.

The EIDS filed on 09/20/2002 with 58 U.S. references is attached hereto as Appendix 3.

The EIDS filed on 09/23/2002 with 52 U.S. references is attached hereto as Appendix 4.

The EIDS filed on 09/24/2002 with 82 U.S. references is attached hereto as Appendix 5.

The EIDS filed on 05/16/2003 with 20 U.S. references is attached hereto as Appendix 6.

"Information disclosure statements (IDS) may be electronically submitted to the United States Patent and Trademark Office (USPTO or Office) via the Office's Electronic Filing System (EFS). When making such an EFS submission of an IDS, *paper copies of U.S. patents and U.S. patent application*

publications cited in the IDS *will no longer have to be supplied* by applicants." [USPTO Office Gazette Notice, 17 September 2002, "Electronic Submission of Information Disclosure Statements", Summary].

Cited U.S. Patent documents in electronically submitted information disclosure statements are supposed to be made readily available to Examiners by the USPTO. This is part of the USPTO's goal of reducing the amount of paper handling. Of course, Foreign references and other types of publications cited in an Information Disclosure Statement require submission of a hard copy by mail.

Applicant respectfully requests consideration of the cited references in these electronic information disclosure statements, if they have not already been considered. Please return a copy of the initialed Form 1449 equivalent for Applicants records in each case.

Additionally, Applicant filed a regular information disclosure statement (IDS) on 12/12/2002 and provided the 5 cited U.S. references and 1 other cited reference. This IDS may have not yet been considered by the Examiner.

The IDS filed on 12/12/2002 listing the 5 cited U.S. references and 1 other cited reference is attached hereto as Appendix 7.

Applicant respectfully requests consideration of the cited references in this information disclosure statement, if they have not already been considered. Please return a copy of the initialed Form 1449 for Applicants records.

CONCLUSION

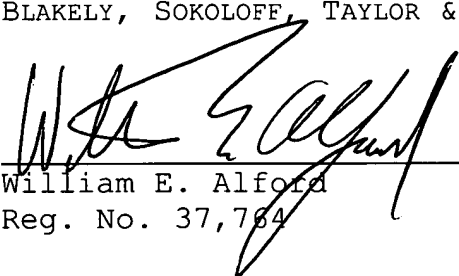
In view of the foregoing it is respectfully submitted that the claims are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance of the claims at an early date is solicited.

The Examiner is invited to contact Applicant's undersigned counsel by telephone at (714) 557-3800 to expedite the prosecution of this case should there be any unresolved matters remaining. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees in connection with the filing of this paper, including extension of time fees, to Deposit Account 02-2666 and please credit any excess fees to such deposit account.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: January 12, 2004



William E. Alford
Reg. No. 37,784

CERTIFICATE OF MAILING

12400 Wilshire Boulevard,
Seventh Floor
Los Angeles, California 90025
(714) 557-3800

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on: January 12, 2004.



Susan McFarlane
Date 1/12/04